

Factors to be analysed



We will analyse the key differentiating features of previously proposed tariff models using National Grid's 0621 tariff model (NG 0621) as the basis

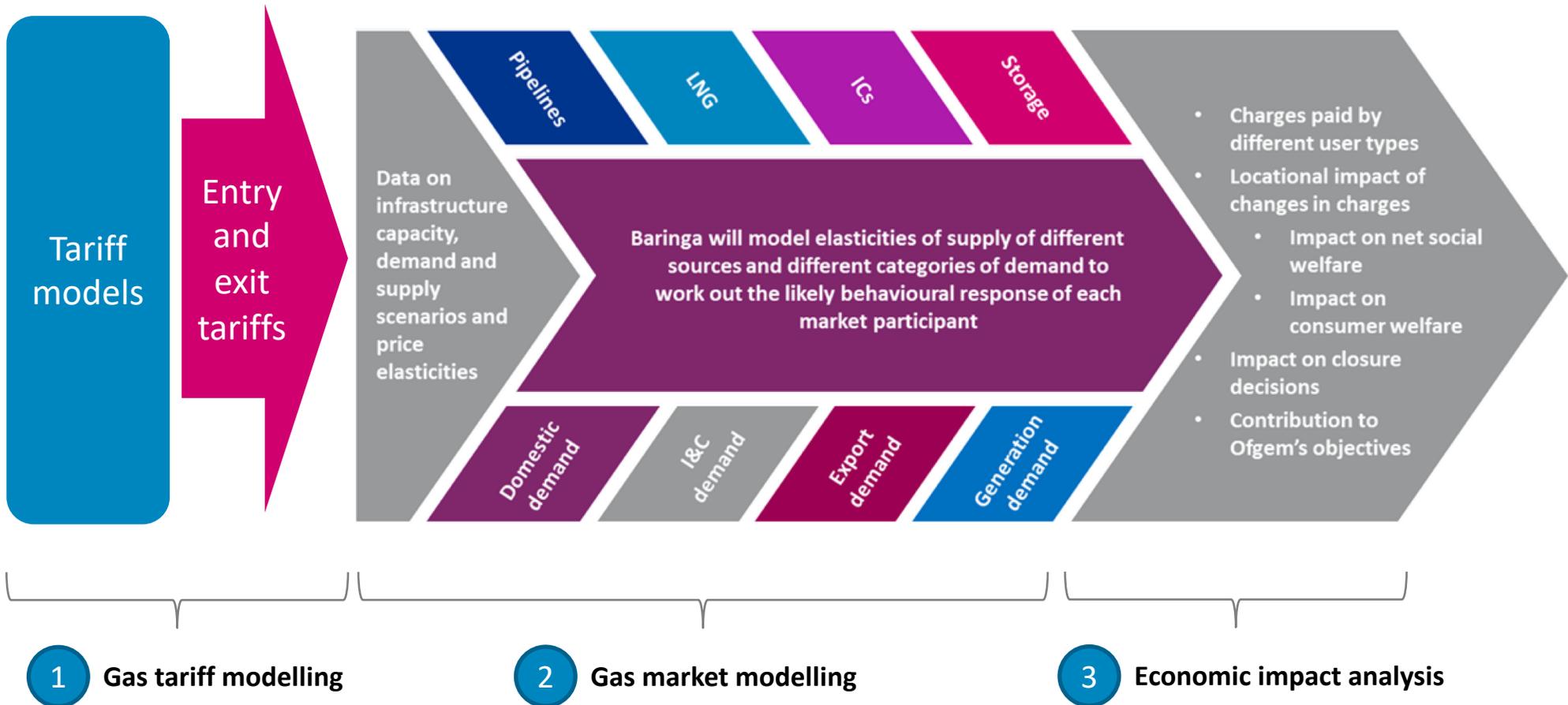
- ▲ First, we assess outcomes under NG 0621 as compared to the status quo.
- ▲ Second, we run sensitivities on individual components of the 0621 methodology:

Component	NG 0621	Proposed sensitivity	Comment
Reference price methodology	Capacity Weighted Distance (CWD)	Postage stamp	This modification would remove tariff differentiation across different entry and exit points respectively, barring the effect of any specific discounts.
		CWD square root	This modification would reduce the extent to which supply points that are more distant from demand centres, and vice versa, pay higher tariffs.
Forecasted Contracted Capacity (FCC)*	National Grid Forecast	Obligated capacity	This modification would involve using FCC based on obligated capacity for the purposes of calculating tariffs.
		Inclusion of Historical Capacity	This modification would involve using FCC based on a calculation that includes historical capacity.
Storage discount	50%	86%	This modification would involve granting a higher (86%) tariff discount to storage bookings.
IP discount	0%	A range of discount levels	This modification would involve granting a tariff discount on bi-directional interconnection points.

** In our analysis, we represent Forecasted Contracted Capacity as the equilibrium level of bookings where (i) the revenue requirement of the gas transmission network is fully recovered from tariffs, and (ii) demand equals supply in our wholesale gas model.*

Proposed approach

Our approach will combine tariff modelling using National Grid's tariff models as the basis and wholesale gas market modelling using Baringa proprietary modelling framework



Outputs of Baringa analysis



We will produce the following outputs to feed into Ofgem's impact assessment

Distributional analysis

- ▲ Unit rates (£/kWh/d) and total revenues (£m) collected at different entries and exit points, calculated for the different user categories at these points

Wider system impact analysis

- ▲ An estimate of the net benefit to GB consumers
- ▲ An estimate of the change in overall net welfare in GB
- ▲ Effect of transitional period on supply and demand at different entry and exit points
- ▲ Impact of tariff changes on gas flows at different entry and exit points, including interconnectors and storage
- ▲ Impact of tariff changes for different points on merit order of NTS gas flows
- ▲ Impact of specific capacity discounts on flows – this will primarily be estimated for storage and interconnector flows
- ▲ Effect on the cost of electricity generation through the changes in the cost of gas (including transmission tariffs) paid by gas-fired power generators

Location and closure decisions

- ▲ Effect of changes in gas transmission network charges on location or closure decisions of:
 - CCGT generators (closure and location)
 - Bi-directional interconnectors (closure)
 - Existing gas storage (closure)